I. *A Demonſtration of the Number of Acres contained in* England, *or* South-Britain; *and the Uſe which may be made of it. By Dr.* Nehemiah Grew, *Fellow of the Royal Society, and of the College of Phyſicians.*

SEveral Perſons, and ſome of great Abilities, have given us, as they have ſuppoſed, the juſt Number of Acres contained in *England*, or *South Britain*, or very near it. The Excellent Sir *William Petty* reckons about 28 Millions: Others, 29 Millions; others, a few more. But I humbly affirm, they have all been miſtaken in under-reckoning.

And the reaſon of their miſtake ſeems to have been, their reckoning only by the Maps; that is, by computed, and not by meaſured Miles; by which only the Number of Acres can be known.

I have ſeen an Account of the Number of Acres in each County: Which Account, whether taken from Dooms-Day Book, or from any other Regiſtry, cannot be True. For tho' we have loſt ſome Land, yet there is a great deal more now gained, which in the Conqueror's time lay under Sea. Within 120 Years, very much has been recovered out of the Seas, and maintained by Banks, in the Marſhes and Fenns of *Eſſex*, *Kent*, and the Iſle of *Ely*. And in ſome Parts of *Lincolnſhire*, the Land has gained of the Sea, 4 Miles in a direct Line from Land to Sea, in the memory of Men now Living.

Nor

Nor is it the Truer, for having been taken from any other Record: For if the Numbers of Acres, according to the ſaid Account, in each Shire, be put together, they exceed not 39 Millions and a quarter: Which Number, tho' it comes much nearer to the Truth than any of the former, yet is a great deal ſhort of it.

For however, according to vulgar Computation, *England*, or *South Britain*, is reckon'd in length but 305 Miles; and in breadth, about 290 Miles: Nevertheleſs, it appears by an exact Wheel-Meaſure, That from New *Haven* in the *South* of *England* to *London*, are 56 meaſured Miles; and that from thence by a ſtrait Line continued to *Berwick* in the *North*, are 339 of the ſame meaſured Miles; in all 395 meaſured Miles, the True length of *England*. And again, that from the South Foreland in the *Eaſt*, to the Lands-end in *Cornwall*, are about 367 Miles of the ſame Wheel-Meaſure, the True breadth of *England*.

This being known, it is eaſy without any laborious and coſtly Survey, to know alſo, how many Square Miles, and conſequently how many Acres are contained in *England*, or *Great Britain*; to wit, in the following manner.

If a Line be drawn on a Chart of *England*, from the South Foreland in *Kent* to *Berwick*; and from the two Ends of this Line, two more Lines meeting at the Lands End in *Cornwal*, they will make the Triangle A B C: Which Triangle, in that it excludeth as much more of the Land, as it includeth of the Sea, as may anſwer the ſmall Number of Miles obtained by the Curvity of the Roads; it may therefore be allow'd to be equal to the *Area* of *England* or *South Britain*. See Tab. I.

Next, if to the Triangle A B C, another Similar and Equal Triangle B C D be added; both together make the Rhomboid A B D C. Which being divided at E F, maketh the Rhomboids A C E F, and B D E F. Equal

one to another. One of which is therefore Equal to the Triangle A B C. And the Rectangle A G H F, ſtanding upon the ſame Baſe, and between the ſame Parallel Lines with the Rhomboid A C E F, by the 35th of the 1ſt of *Euclide*, is Equal to the ſaid A C E F: Equal to the Triangle A B C: Equal to the *Area* of *England*, or *South Britain*.

Now the length between *Berwick* and the South Foreland in *Kent*, being about 5 Miles more than between *Berwick* and *New Haven*, which is 395 Miles: Therefore the Line A B, may be taken for 400 Miles; and ſo the Line A F, for 200. And the Line A G being leſs by about 7 Miles, than between the South Foreland in *Kent*, and the Lands End in *Cornwall*, which is 367 Miles, the ſaid A G, may be taken for 360 Miles. Therefore A G, 360, being multiply'd by A F, 200, produceth 72000 Square Miles: And 72000 being multiply'd by 640, the Number of Acres contained in one Square Mile, produceth 46 Millions and 80000, the Number of Acres contained in *England*, or *South Britain*.

Whence it appears,

Firſt, that if the Province of *Holland* contains, as is computed, but one Million of Acres, then *England* is more, by a Fraction of 80000 Acres, than 46 times as big as *Holland*.

Next, if in the Province of *Holland*, containing but one Million of Acres, are two Millions and 400 Thouſand Souls, or two Millions and 4 10ths, as they are ſaid to be; then *England*, which contains 46 Millions of Acres, to be proportionably Populous, ſhould have twice 46 Millions of People, and 4 10ths of 46; that is, about 110 Millions.

But to allow room enough for Perſons of all Degrees under our *Britiſh* Monarchy, if *England* were half as Populous as *Holland*, with only 55 Millions, it were a

good

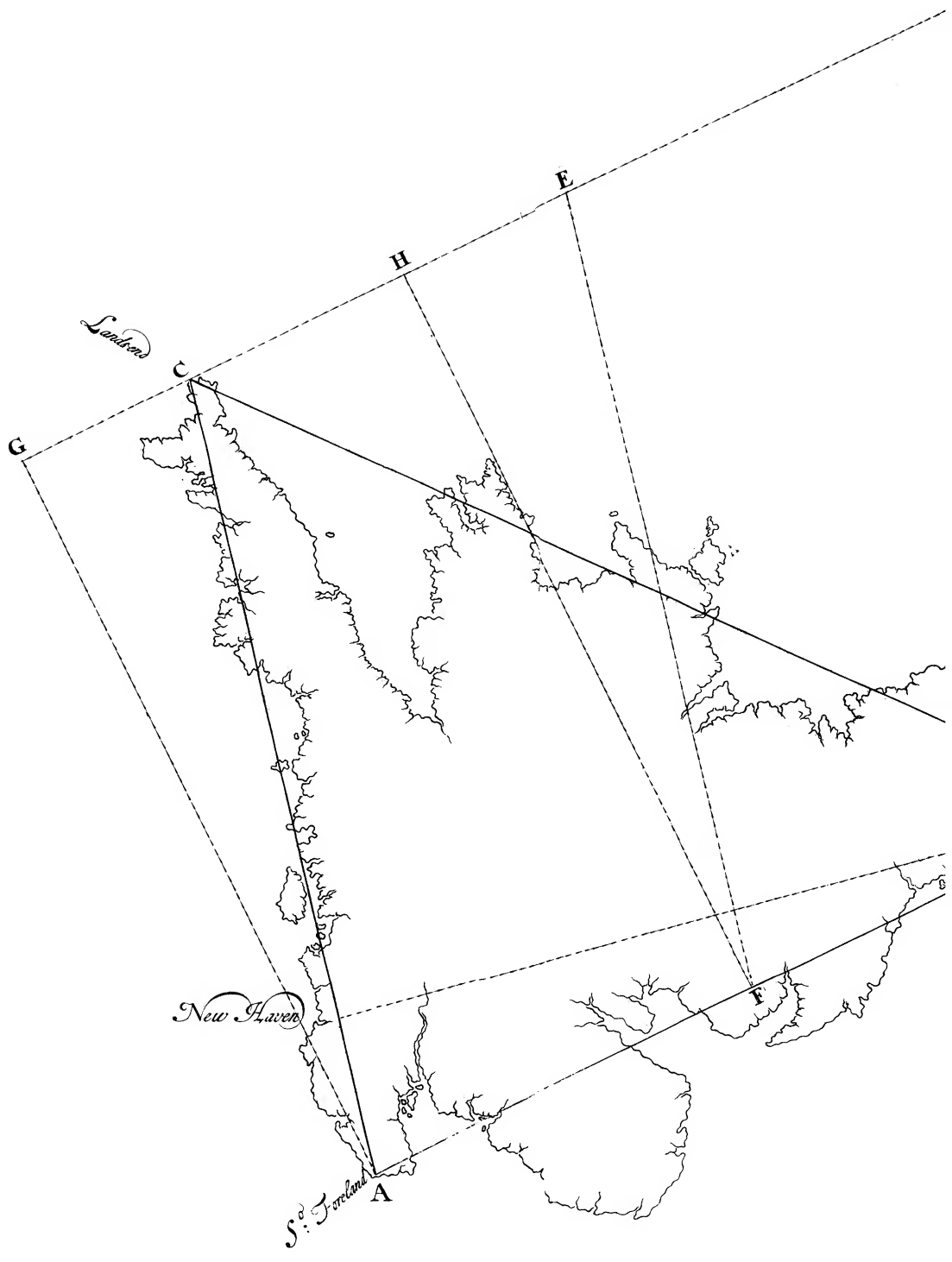
good Proportion, and would be near 5 times our preſent Number: And about 22 times as many, as in the Province of *Holland*.

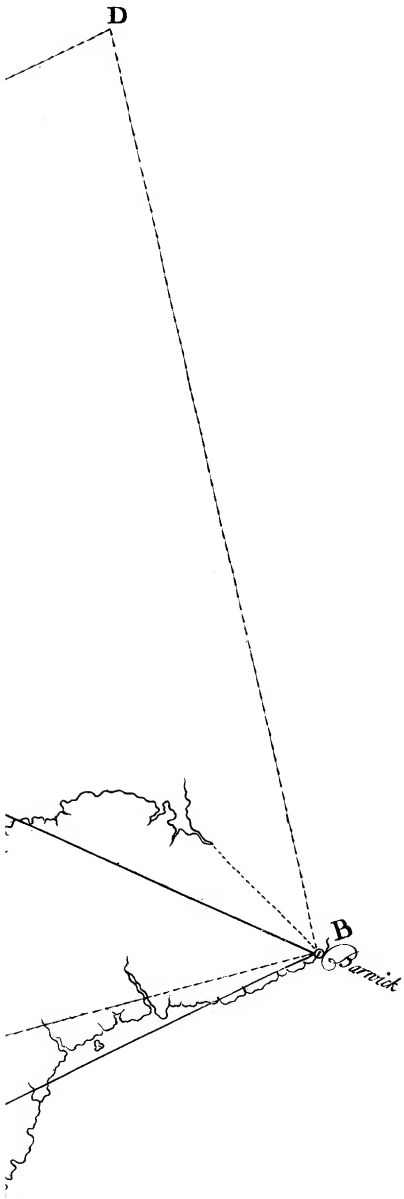
To People *England*, in a competent Time, with this Number; there are ſundry ways very practicable. By which, I have computed, the preſent Number may be doubled in 24 or 25 Years. And probably quadrupled in about 36 Years.

One of theſe Ways, tho' not the ſpeedieſt, would be the introducing of Strangers: Yet to make uſe of this, or of any other Way, to multiply the People, before we have provided the Means of Employing them, (as was lately done) would be prepoſterous.

But when we ſhall once, in good earneſt, mind our True Intereſt, in Employing, and Encouraging, every where, our own Hands, and the Hands of other Nations, as the *French* and *Dutch* do, in all the ſorts of Husbandry, Manufactury, and Merchantry: When our Nobility and Gentry themſelves, ſhall, as in ſome other Countries, be Examples in ſome or other of theſe Particulars: When we ſhall hereby be univerſally engag'd to Incloſe, and to Improve, every Foot of our Land; to make the utmoſt Uſe of all our Home Growths, above and under Ground; and of all our Ports, (about 200 great and ſmall,) more than in all the Kingdoms and States of *Europe* put together: And when *Scotland* and *Ireland*, ſhall both of them afterwards be Improved in like manner: When all Mens Heads and Hands ſhall be thus Employed, about ſome one Honeſt and Profitable Buſineſs; as it will naturally promote every where Peace and Friendſhip among us; ſo is it eaſy for any conſidering Man to foreſee, how highly it will advance the *Britiſh* Monarchy and People, at Home and all over the World, in Beauty, Strength, and Glory.

Tab. I.

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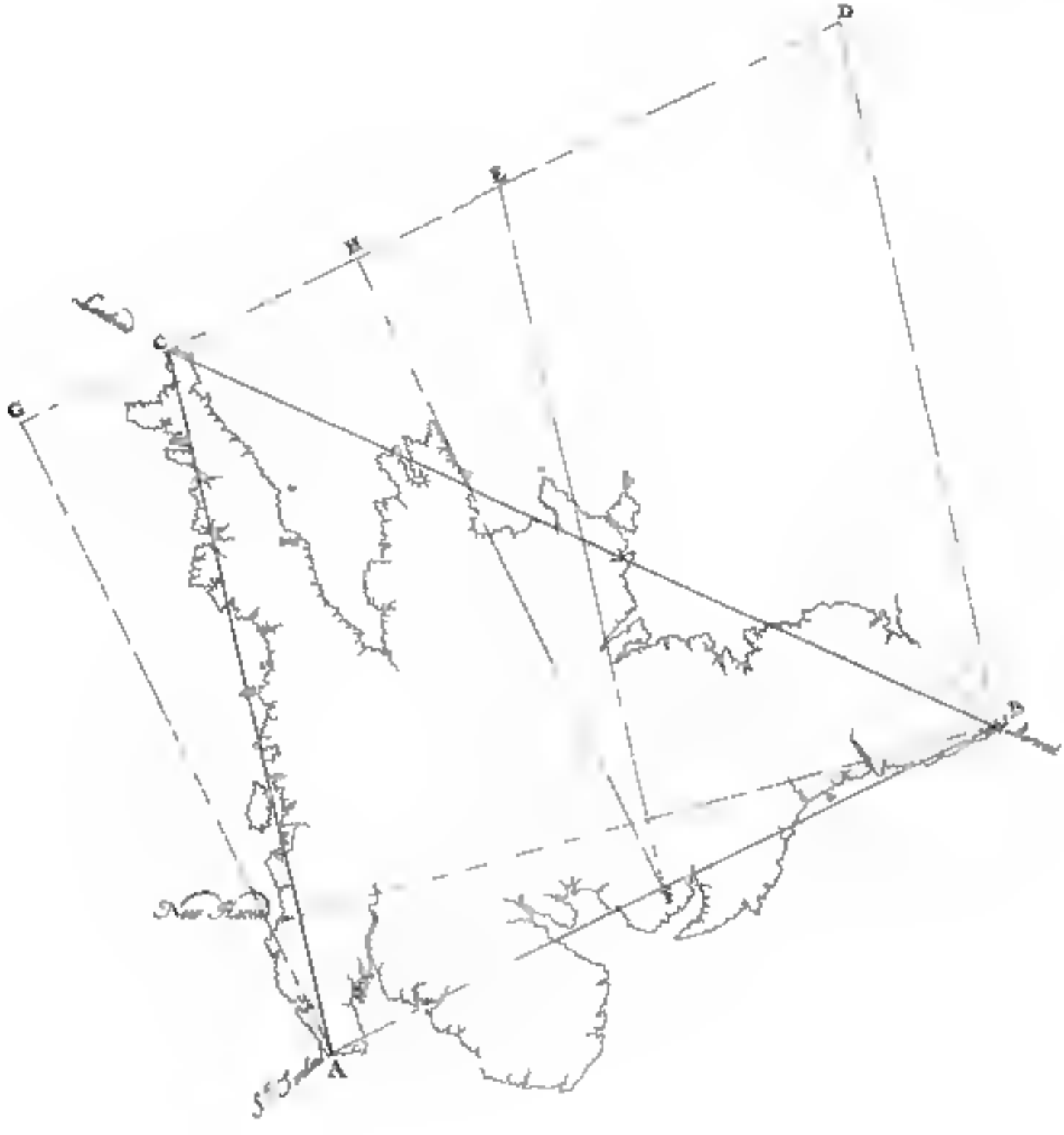
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